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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/567,780

02/09/2006

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Q92662

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23373 7590 07/16/2007
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EXAMINER

NGUYEN, HANH N

ART UNIT

PAPER NUMBER

2834

MAIL DATE

DELIVERY MODE

07/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/567,780

Applicant(s)

AKITA ET AL.

Examiner

Nguyen N. Hanh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Remarks

1. Since the Examiner failed to address newly added claims 23-27 in the Non-Final rejection mailed on 6/6/2007, a supplemental action is made to fix the problem and a period for reply is set to expire 2 months according to MPEP 710.06.

Response to Arguments

2. Applicant's arguments with respect to claims 12-22 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Baldoni (EP 0 799 697).

Regarding claim 12, Baldoni disclose a dynamoelectric machine comprising: a case (21 in Fig. 1) having a suction aperture for sucking in air and a discharge aperture for discharging said air (Fig. 1); a rotor (25) including: a rotor coil (28) disposed so as to be fixed to a shaft inside said case, said rotor coil generating magnetic flux on passage of electric current; and a Lundell pole core (36, 37) disposed so as to cover said rotor coil, said pole core having a plurality of claw-shaped magnetic poles that are magnetized by said magnetic flux (Fig. 2); a stator including: a stator core (23) disposed

so as to surround said rotor; and a stator coil (24) formed by winding a conducting wire into slots extending axially on said stator core; a fan (54, 58 in Fig. 3) rotating together with said rotor, said fan directing said air from said suction aperture into said case, blowing said air centrifugally, and discharging said air externally through said discharge aperture (Fig. 1), said pole core being constituted by a first pole core (36) body and a second pole core body (37) in which said claw-shaped magnetic poles intermesh with each other alternately (Fig. 3), wherein: said fan has a blade (65, 66 in Fig. 3) including an interposed portion (60) extending axially from an end surface of said pole core between an adjacent pair of said claw-shaped magnetic poles (Figs. 1, 2 and 3).

4. Claim 12, 14-18, 21-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Vasilescu et al (Pub. No. US. 2003/0030334).

Regarding claim 12, Vasilescu et al. disclose a dynamoelectric machine comprising: a case (36, 38 in Fig. 1) having a suction aperture for sucking in air and a discharge aperture (Fig. 1) for discharging said air; a rotor (16) including: a rotor coil (18) disposed so as to be fixed to a shaft inside said case, said rotor coil generating magnetic flux on passage of electric current; and a Lundell pole core (20, 22) disposed so as to cover said rotor coil, said pole core having a plurality of claw-shaped magnetic poles that are magnetized by said magnetic flux (Fig. 2); a stator including: a stator core (32) disposed so as to surround said rotor; and a stator coil (34) formed by winding a conducting wire into slots extending axially on said stator core; a fan (48 in Figs. 1 and 2) rotating together with said rotor, said fan directing said air from said suction aperture into said case, blowing said air centrifugally, and discharging said air externally through

said discharge aperture (Fig. 1), said pole core being constituted by a first pole core (20) body and a second pole core body (22) in which said claw-shaped magnetic poles intermesh with each other alternately (Fig. 2), wherein: said fan has a blade (50 in Fig. 2) including an interposed portion extending axially from an end surface of said pole core between an adjacent pair of said claw-shaped magnetic poles (Figs. 2 and 3).

Regarding claim 14, Umeda et al. disclose a dynamoelectric machine wherein a coil end (34) is formed in said stator coil by folding said conducting wire over outside an end surface of said stator core (Fig. 1); and a space is formed in said coil end above said end surface by said conducting wire having straight portions projecting axially outward from said end surface (Fig. 2).

Regarding claim 15, Vasilescu et al. also disclose a dynamoelectric machine wherein: said interposed portion of said blade projects toward one of said claw-shaped magnetic poles in said adjacent pair of claw-shaped magnetic poles (Figs. 1 and 2).

Regarding claim 16, Vasilescu et al. also disclose another embodiment wherein said interposed portion of said blade is bent at a bent portion so as to have an angular shape when viewed radially (Fig. 5).

Regarding claim 17, Vasilescu et al. also disclose a dynamoelectric machine wherein said interposed portion of said blade (Fig. 5) is bent at a bent portion so as to have an angular shape when viewed radially; and said bent portion is disposed radially opposite said space (Fig. 1).

Regarding claim 18, Vasilescu et al. also disclose a dynamoelectric machine wherein: said fan is formed by bending a flat plate (the method of forming the device is

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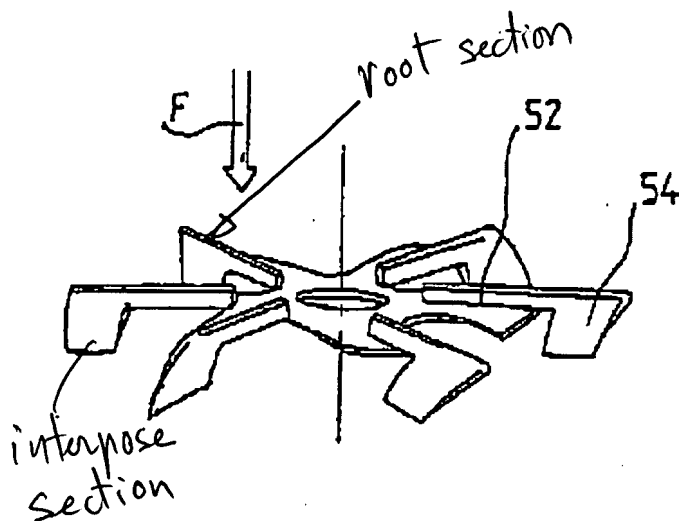
not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight).

Regarding claim 21, Vasilescu et al. also disclose a dynamoelectric machine wherein: blades of said fan are disposed at a nonuniform pitch circumferentially; and a blade disposed between an adjacent pair of said claw-shaped magnetic poles has said interposed portion (Fig. 2).

Regarding claim 22, Vasilescu et al. disclose a dynamoelectric machine wherein said fan is fixed only to an end surface of said pole core near a rectifier for converting alternating current generated in said stator into direct current.

Regarding claim 23, Vasilescu et al. disclose a dynamoelectric machine wherein the interposed section extends axially between said adjacent pair of claw shaped magnetic poles and over said rotor coils (Figs. 2 and 3).

Regarding claim 24, Vasilescu et al. disclose another embodiment of a dynamoelectric machine wherein said blade comprises a root section disposed so as to extend from the end surface of said pole core and the interposed section that extends between the adjacent pair of claw shaped magnetic poles.



Regarding claim 25, Vasilescu et al. disclose a dynamoelectric machine wherein the fan comprises first and second blades, each comprising the interposed portion that extends axially between the adjacent pair of said claw-shaped magnetic poles and wherein each of the pair of claw shaped magnetic poles extend between the interposed section of the first blade and the interposed section of the second blade (Fig. 2).

Regarding claim 26, Vasilescu et al. disclose a dynamoelectric machine wherein the interposed section of each of the first and second blades and the pair of claw shaped magnetic poles extend in a substantially same direction (axially downward direction as shown in Fig. 2).

Regarding claim 27, Vasilescu et al. disclose a dynamoelectric machine wherein the interposed section extends between the adjacent pair of claw shaped magnetic poles without contacting the adjacent pair of claw shaped magnetic poles (Figs. 2 and 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vasilescu et al. in view of Umeda et al.

Regarding claim 13, Vasilescu et al. show all limitations of the claimed invention except showing the dynamoelectric machine wherein: said stator coil is wound into a distributed winding in which said conducting wire is disposed in a orderly manner inside said slots at intervals of a predetermined number of slots.

However, Umeda et al. disclose the dynamoelectric machine wherein: said stator coil (33 in Fig. 2) is wound into a distributed winding in which said conducting wire is disposed in a orderly manner inside said slots at intervals of a predetermined number of slots for the purpose of preventing heat problem of the alternator (Col. 1, lines 64-67).

Since Vasilescu et al. and Umeda et al. are in the same field of endeavor, the purpose disclosed by Umeda et al. would have been recognized in the pertinent art of Vasilescu et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Vasilescu et al. by winding the coil into a distributed winding in which said conducting wire is disposed in a orderly manner inside

said slots at intervals of a predetermined number of slots as taught by Umeda et al. for the purpose of preventing heat problem of the alternator.

6. Claims 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vasilescu et al. in view of Hayashi et al.

Regarding claim 19, Vasilescu et al. show the dynamoelectric machine wherein a distance between said interposed portion and said adjacent pair of claw-shaped magnetic poles is greater than a distance between an inner peripheral surface of said stator core and an outer peripheral surface of said rotor (Figs. 1 and 2). Asao fails to show the fan is made of iron.

However, Hayashi et al. disclose the dynamoelectric machine wherein the fan is made of iron (Col. 3, lines 45-48) for the purpose of reducing noise of the alternator (Col. 1, lines 45-50).

Since Vasilescu et al. and Hayashi et al. are in the same field of endeavor, the purpose disclosed by Hayashi et al. would have been recognized in the pertinent art of Vasilescu et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Vasilescu et al. by using iron to form the fan as taught by Hayashi et al. for the purpose of reducing noise of the alternator.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vasilescu et al. in view of Nagate et al.

Regarding claim 13, Vasilescu et al. shows all limitations of the claimed invention except showing the dynamoelectric machine wherein fan is constituted by a nonmagnetic material.

However, Nagate et al. disclose the dynamoelectric machine wherein fan (39 in Fig. 36) is constituted by a nonmagnetic material (Col. 23, line 15) for the purpose of preventing effect of flux leakage from the rotor (Col. 23, lines 16-17).

Since Vasilescu et al. and Nagate et al. are in the same field of endeavor, the purpose disclosed by Nagate et al. would have been recognized in the pertinent art of Vasilescu et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Asao by using non-magnetic material to form the fan as taught by Nagate et al. for the purpose of preventing effect of flux leakage from the rotor.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (571) 272-2031. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg, can be reached on (571) 272-2044. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

HNN


July 10, 2007